fin ditto, 257*l*; Claretown ditto, 310*l*.; Claren ditto, 10*l*. 10*s*.; Toberbracken ditto, 200*l*.; Mailcoach-road ditto, from Galway to Dublin, 132*l*.; Barrack ditto, 13*l*.; Bridge-street ditto, 22*l*.; Moycullen ditto, 80*l*.; Claregalway ditto, 424*l*.; all in the county of Galway.

The plan of the proposed "glass palace" at Belfast will be rectangular, its total dimensions being 110 feet by 57 ft.: a dome is to surmount the edifice, the height to its summit being 40 feet. The building will be constructed principally of glass, wood, and cast-iron, and the roof is to be formed on the ridge and furrow principle. The water will be conveyed down the pillars at sides, and from their bases into sewers. There are to be no metal girders, whatever, and the pillars are to be cast in one length. The cost of erection is estimated at 7*50l*. Mr. John Boyd, architect, of Belfast, has been instructed to prepare the necessary drawings.

The railway to Waterford is to be proceeded with: it is to join the Waterford and Kilkenny line close to Waterford, both companies having a common terminus. The line will be finished to the junction, near Waterford, in little more than two years: the remaining portion (52 miles) is confidently expected to cost only 8,000*l*. per mile; and the average cost of the whole line (77 miles) will not exceed 12,000*l*. per mile. Mr. G. W. Hemans is the engineer-in-chief.

A new Temperance Hall has just been completed at Dungannon.

The addition to the old Infirmary, county Sligo, is now in progress of erection, according to plans by Mr. Wm. Deane Butler, architect, of Dublin. Attention, it is said, has been paid to provision for heating, ventilation, and light; day-rooms for convalescent patients; and the speedy removal of all nuisances by soil-pipes attached to each ward. A system of lifts is observed throughout, by which much time and labour are saved.

RAILWAY JOTTINGS.

A LARGE force of excavators has been put on the works of the large tunnel on the South Wales Railway, west of Swansea.——It is reported that the contracts and working plans of the Great North of Scotland Railway between Aberdeen and Keith, or Huntly, have been signed by contractors, and that the works will be commenced forthwith.——The South-Western Railway Company, says the *Hampshire Advertiser*, "are attempting to charge, for the conveyance of working men to the International Exhibition more than double the amount for which they brought the Londoners down to Southampton by the excursion trains last year, and which turned out to be so profitable a speculation." We have heard of extravagant spendthrifts first ruining themselves by profuse expenditure in their youth, and then ending themselves in their maturity by miserly and unreasonable greed of gain, frustrating its own aim by an extreme as great as the first, though in the opposite direction. It really appears as if the railway interest, having gone through the former process, were now bent on pursuing the latter. The idea entertained by some of the companies, that by charging the Exhibition excursionists double the amount charged with so much profit to other excursionists, they will double that profit, is puerile: they not only will not double it, but they will not equal it. The cheapness of the fare was the *sine qui non* of that profit: surely the most fatuous miser might now be able to comprehend that fact. As for all the difference between the special attractions of the Exhibition itself, and those of previous or other excursions, the companies will find that neither Cocker nor Stocker will bear them out in their calculations on that score. The personal expenses are a heavy drawback, which it would be well for the railway companies not to cast the scale against altogether. Their cue is rather to smooth the way—to tempt towards the incurment of that expense—*by excursion fares more than usually low*, in place of more than double the usual amount,—a gross error in self-interest. Our advice the companies ought to respect; for they have had THE BUILDER to thank for the excursion profits of the past year, and of many a year yet to come.——The Great Northern now supply coals to the metropolis at rates so low that they are delivered free of all expenses, in London and within five miles of it, at 17*s*. a ton for the best, and 14*s*. for the lowest: sixpence a mile extra beyond five miles. Attempts have been made to prevent the sale of this coal in the metropolis, by false representations as to its quality for household purposes. We have purchased and used some of the best quality ourselves, and find it not only excellent but preferable to what had been previously in use at a considerably higher price. The public benefit, moreover, thus derivable from railway transit, will not cease here; for doubtless the prices of all other coals in the metropolis must, in consequence, be very speedily reduced.——A statue of the late Mr. G. Stephenson, by Gibson (lately dispatched from Italy), is to be placed in St. George's Hall, Liverpool. It was sculptured at the cost of the Liverpool and Manchester company, and will be exhibited at the Royal Academy before its inauguration. The *Gateshead Observer* asks, "where is the Newcastle statue," and complains that "the prophet has no honour in his own country."

ANCIENT CHURCH ARRANGEMENTS.

THIS little (and as I am beginning to fear) serio-comic controversy about ancient church arrangements, in which Cardinal Wiseman (*sub-silentio*), Mr. Elliott, and my nameless self, appear as champions, reminds one of the story of the three brothers, under which the witty Dean of St. Patrick's describes the three classes of religionists which we perhaps severally represent. Mr. Elliott and I take the places of the two younger brothers, who, on discovering the sophistries by which their elder brother had induced them to overlay their simple coats with the trappings of successive modern fashions, set to work, each in his own way, to rid their garments of these spurious overlayings. The second brother, "Martin," sets to work quietly to unpick the stitchings by which the offending patches have been attached, his chiefest care being to avoid injuring the coat; while the third, who is disrespectfully named "Jack," in his fury at finding to what deceptions he had been subjected, is less cautious in his operations, and with every patch he gets rid of, he tears off a shred from the original garment. Poor Martin, through taking the middle course, becomes the butt of both his brothers: Peter declares him to be only a spurious edition of Jack, while the latter thinks him worse than Peter, inasmuch as his simpler dress gives him an aspect of feigned purity; so that between the two, he leads a very disquieted and thankless existence.

Now I find myself exactly in this unhappy position. I hold myself to be a very good Protestant, and have even been accused of fanaticism on that side on some questions bearing upon architecture; but to my infinite dismay, I now find myself placed on the same side of the lists with Cardinal Wiseman and Pugin, and all because I cannot bring myself to take up with this little monomania of Mr. Elliott's! Being, however, conscious of no wish but to distinguish the *coat* from the *patches*—the original from the spurious—I willingly bear with this reproach; nor will I again try to shake Mr. Elliott in an opinion he holds so dear.

My object in now writing is merely to beg any of your readers who may feel interest, and desire more information on the subject, to refer quietly to the various authorities to which I have before alluded, and to collate Mr. Elliott's quotations with the original. I will not again risk the charge of "begging the question," but I think I am pretty safe in anticipating their conclusion, that he has, in his zeal for his own view, deduced from Justin Martyr conclusions for which he gives no ground; that he has diametrically reversed the meaning of Eusebius; and that he has quoted, as from St. Paul, a statement not to be found either in his or any other of the sacred writings. His quotations and deductions from my own letter are almost equally open to dispute, but they may be easily examined. He claims a great victory over me from the admission supplied from my quotation from Siegel as to persons not having been, in the earlier ages, absolutely excluded from approaching the altar; while it will be clear to any reader of church antiquities, that it is a point on which no one ever dreams of doubting. He accuses me of saying that Canterbury Cathedral was like the basilica of St. Peter, and jokes a great deal himself, and suggests that I was joking in making such an assertion.

What I said, however, referred, not to the existing, but to the "*early* cathedrals," and that only to some portions of the arrangement, and my "jokes" were derived from Professor Willis's admirable treatise, to which I beg to refer. He further accuses me of attributing the increase of the length of chancels to "the increase in the number of the *clergy*," carefully omitting the words "*or choir*," which make all the difference. I am not anxious about this last question, as I hold neither with transubstantiation nor with very extended chancels; but I would ask, if one were the sole cause of the other, how we are to account for the great varieties in their length, and the accompanying increase or diminution of the *stalls* they contain? If, for instance, at Boston, one of the largest simply parochial churches, we find a chancel of some 80 feet in length, containing no less than sixty-four stalls, besides other seats for about a dozen people, while in modern Roman Catholic chapels (and in some few ancient churches), we often find no chancel at all, excepting merely the altar space, and no stalls whatever, is it most reasonable to attribute this to a difference of *staff* or a difference of *doctrine*?*

This, however, is not the question between us: on the real question I will only again urge that those who seek such information should apply to the best authorities and *judge for themselves*; but as Mr. Elliott has boldly claimed the first seven centuries as his own, and *existing* churches as his evidence, he must not be allowed to retreat behind the cloud of the three first centuries, on whose church arrangements we have so little direct information.

S.

GUIDANCE OF BALLOONS.

A CORRESPONDENT, "Sub Dio," has been trying his hand at the solution of this knotty problem, and the result, though not so novel as he probably supposes, is well worth recording, in as much as the ideas which force themselves on the notice of a number of minds independently meditating on the same subject, are likely to prove, ultimately, in one shape or other, to be the most feasible and practicable. "Sub Dio" is of opinion that it is in vain to attempt to imitate the bird or the fish in the general principle of balloons, yet he suggests that the form should be that of a ship, or at least the bow or breast of such a vessel, not adverting to the circumstance that in all probability this very form is itself an imitation of that of swimming birds. However, that is an oversight of secondary moment, and moreover it is more particularly the form and movement of the wings to which "Sub Dio" refers, and which he thinks it will be in vain to attempt to imitate: yet mechanicians have successfully imitated far more unlikely and more complicated movements than this. The main principle of our correspondent's suggestion is that progressive motion in any desired direction might be obtained by means of a screw propeller, of canvas, affixed to the stern of a light bamboo-framed, sloop-shaped, gas-filled, and buoyant balloon, with a keel spreading out below into a gig for conveyance—all of a piece, or fixed, not suspended, to the machine, so as to enable the canvas fan-screw to act simultaneously on the whole. He thinks

* I believe that the fair proportions of the building had also a due influence on the length of chancels; but, as a general rule, that they varied with the collegiate or other choral staff, whether permanent or occasional. I could point out an instance of a chancel being in the reign of Edward IV. reduced to one-fourth of its length, still retaining the usual choral arrangement, with new screen and stall seats, simply from an accompanying change in its ecclesiastical staff.

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